Open House for the Ruthrauff Basin Management Plan

Pima County Regional Flood Control District

November 16, 2016
Welcome

* Last Open House: December 14, 2014
Welcome

* Project Purpose & Need
  * Develop a Comprehensive Flood Control Program
  * Develop Cost Effective Drainage Alternatives
  * Provide a Balanced Multi-Objective Approach
  * Provide a Basis for Future Budgets to Reduce Flooding
Drainage and Floodplains

- Drainage Problems
  - Ponding Water
  - Flooded Intersections
  - Disruptions

- Regulatory Floodplains – Show spatial extent of largest flood expected in 100 Years
  - Identifies at-risk property
  - May affect building requirements
  - May affect insurance requirements
Meeting Purpose

- Update You on the Status of the Project
- Inform You of the Project Recommended Alternatives
- Discuss the Project
- Discuss Next Steps
Agenda Review

- Open House
- Opening Comments
- Meeting Purpose & Agenda Review
- Project Status
- Overview of Recommended Alternatives
- Summary & Next Steps
- Adjourn
* **Scope of Work**

* Existing Conditions Analysis  
  Completed
* Floodplain Analysis and Mapping  
  Completed
* Prep/Submittal of FEMA Map Revision  
  Completed
* Alternatives Analysis Recommendations  
  Tonight
* Public and Stakeholder Involvement  
  Ongoing
Drainage Complaints
Project Overview

* Hydrologic Analysis
* 100-Year Floodplain Delineation
Project Overview

* FEMA Map Revision
Updated FEMA Floodplains

Flowing Wells Wash & Runway Drive Area LOMR - Annotated FIRM
Project Overview

* Alternatives Analysis & Recommendations
Alternatives Analysis Process

1. Use Drainage Complaints & New Info to Identify Significant Flooding Areas
2. Involve Public Representatives & Stakeholders in Evaluating Solution Alternatives
3. Develop & Refine Alternatives
4. Evaluate the Alternatives
5. Determine Recommended Alternatives
Alternatives Analysis Results

1. Providing improved drainage through the railroad embankment
2. Slowing water and reducing flood peaks at 15 multi-use basins (392 ac·ft total storage)
3. Conveying water in 23,400 linear feet of drainage channels
4. Improving 12,420 linear feet of roadways to better convey water (e.g., inverted crowns)
5. Conveying water in 3,500 linear feet of storm drain
6. Applying practices across the basin that reduce potential for flooding (e.g., infill, maintenance, roadside stormwater harvesting basins... etc.)
The Plan capitalizes on the improved drainage along the I-10 corridor.
The Plan developed alternatives that consider costs and multiple benefits for the community.
The alternatives address the significant building and street flooding problems.
There will be an Implementation Plan, which will identify short and long-term solutions as well as funding and phasing.
As the alternatives are implemented or constructed there will be less flooding problems in this area.
Recommended Alternatives

* Western Edge Culverts and Drainage Improvements
Recommended Alternatives

* Multi-Use Retention/Detention Basins
Retention Basins (2)
Area = 10.6 acres
Qin = 451 cfs
Qout = 4 cfs
Max Depth Water = 19 ft
Max Depth Excavation ~ 23 ft
Recommended Alternatives

* Channel Construction and Improvements
Earthen Channel
Length = 2,900 ft.
$Q_{\text{max}} = 50$ to 100 cfs
$Q_{\text{cap}} \sim 125$ cfs
Tri Shape: 4:1 SS, 3:1 SS
2.5-ft depth

**Alternative 2**
Recommended Alternatives

* Roadway Improvements
Roadway Reconstruction
Length = 1420 ft.
Qmax = 61 cfs
Qcap = 62 cfs
Roadway Shape: inverted
0.7 ft depth

Alternative 1
Recommended Alternatives

- Storm Drain Systems
Some Area-wide Alternatives

- Develop More Systematic Drainage Maintenance
- Develop Infill Incentives with Incentives that Include Improved Drainage
- Require New Developments to Reduce Floodplain Limits
- Encourage Green Infrastructure (e.g. roadside stormwater harvesting basins)
- Improved Public Awareness via Community Outreach
Products

* Final Report Consisting of...
  * Existing Condition Report
  * New FEMA Floodplain Maps for Flowing Wells Wash and Runway Drive Area
  * Accurate Floodplain Maps in Project Area
  * Alternative Selection Report
  * Public Outreach Summary Report
  * Implementation Plan (Recommendations for Funding & Scheduling of Solutions)
Summary/Next Steps

* Consider your comments
* Finalize recommended alternatives plan
* Keep the Community informed & involved
* Continue to update website
* Prepare an implementation plan for adoption by jurisdictions
Schedule

Project Timeline

- Existing Conditions Analysis
- FEMA Floodplain Mapping
- Local Floodplain Mapping
- Alternatives Analysis
- Public Involvement

Months

November, 2016
Public Input/Questions

* Questions?
Acknowledgments

Thank You!
Adjourn

Thank You!